

## ONE STOOL OF WHEAT

Astonishing Range of Root System of Dry Farmed Product.

Proper System of Summer Fallowing of Rotation of Crops, Together With Thorough Plowing Conserves Much Moisture.

(By ED. H. WATSON, Director of Dry Farming Experiments for State of Wyoming.)

The accompanying illustration represents a single stool of Turkey Red Winter Wheat secured near Burns, Wyo., under the direction of the Wyoming dry farm board. A trench eight feet long, four feet wide and eight feet deep was dug one and one-half feet from the plant. By means of a fine spray of water from a force pump the soil was washed away from the wheat roots, which as far as possible were preserved. There were more than 50 of them in number, and they all penetrated to a depth of six inches in length, with a general average of a foot to three inches, and spaced along the main root about one-fourth of an inch apart. It would be a conservative estimate to say that the total length of all the laterals of any one root was at least ten times the length of the root itself. It thus becomes a simple process of calculation to ascertain that the combined length of the root system of such a plant approaches a mile—a fact not so remarkable when it is considered that a single stool of wheat may produce more than 50 heads, which necessarily require a great many feeders to keep up the food supply.

The plant was taken from land which during the past three years has grown potatoes and other cultivated crops. The object lesson it teaches is very plain. A proper system of summer fallowing or of rotation of crops together with thorough plowing and careful maintenance of the surface mulch, will permit the moisture that falls during normal years to be stored to a considerable depth in the soil. If the moisture is thus present, the wheat roots have the power to forage "into the deep" in search of it. This fact enables the dry farmer to mature his crop of grain with little or no rainfall during the growing season.

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## SAVING MOISTURE IN SPRING

Harrow Should Be Started Just as Soon as Frost is Out of Ground—Light Mulch Found Good.

Harrowing will often save wheat that is in danger of destruction by high winds in the spring. Many fields that get a good growth in the fall and come through the winter in excellent condition are lost by drying up in the spring winds for want of proper treatment. Start the harrow as soon as the ground is dried after the frost has gone out of the surface soil, says a writer in an exchange. Harrowing forms an earth mulch that holds the moisture, fills the cracks and keeps the dry air from getting at the roots and usually it makes the young plants stool more. It is a good plan, under average conditions, to keep the harrow running until the wheat is four to six inches high.

However, harrowing sometimes is the worst thing that can be done for a field. I saw a settler using his harrow when it was pulling at least half the plants clear out of the ground. He could not have been giving the field worse treatment. It was loose and mellow as an ash heap. What it needed was sub-surface packing. Under such conditions the packer will often put a field in condition for high yields.

It is a good plan, in sections where wheat is likely to be blown out or damaged by spring winds, to mulch the field lightly with either straw or manure, when the ground is frozen, along about midwinter. In addition to making a moisture holding mulch the straw and manure becomes somewhat imbedded in the soil, helping to lessen the effect of the winds. Where straw or manure has been scattered over the wheat field in winter it will be advantageous to use the sub-surface packer early in the spring. The packer will anchor the coarse material so that it will not blow and thus will hold the wheat and the soil. Later in the spring the packed field may be harrowed to advantage.

Separate the Flocks. Impure air, as well as dampness, are a danger to any flock. Separate the flocks in bunches of 25 or 30, and feed them separately, and they will make much better gains.

## PRACTICE OF DEEP PLOWING

It Is Necessary for Water Conservation—Farmers Alive to Scientific Aids Just Developed.

In the new farming, deep plowing is practiced. The heavy traction plows bite deeper than the ordinary plows. Deep plowing is a necessity for water conservation. Every drop of water must be held in the soil if a crop is to be grown. This is best done by plowing deep and then breaking all lumps with the cultivator. Where lumps are left in the top soil, the wind quickly dries them and draws the moisture out of the soil. But when the soil is plowed deep and the surface tightly packed, all moisture that falls is retained for an incredible length of time, and feeds the roots of the wheat during the summer months when no rain falls.

The plant seeders plant only half a bushel of wheat to the acre, which is sufficient for the needs of the "low grade farmer." Under such conditions a yield of ten bushels of wheat to the acre means a good profit to the individual who farms by wholesale. Such a yield would spell poverty for the small farmer with a hundred or two acres—but there is where the difference between high-grade farming and low-grade farming comes in, just as in mining.

The farmers who have begun this task of "whipping the desert" are alive to all the scientific aids that have been developed in recent years. They have studied the various dry-farming theories from Campbell's down, but are generally following the "Kelly system." Kelly is a plain, hard-headed farmer who has lived for years on the high plains of eastern Colorado, and who has followed his own unique method of crop raising with such good results that he is now wealthy. Kelly plows deep the first year, but afterward pays little attention to the cultivation of the soil. Instead of fighting the weeds and Russian thistles, he uses them as an aid. He plants his wheat among them, because the weeds act as a protection to the seeds, when the hot, dry winds of early spring and late fall are blowing.

The question of acclimatized seed is also one to consider in reclaiming the desert, either by wholesale or retail means. About twenty years ago Robert Gauss of Denver began a series of experiments, in the belief that a drought-resisting wheat could be developed. He conducted an experimental farm on the high plains east of Denver, each year planting selected seed from the crop of the preceding year. In this way he worked noticeable changes in the form of wheat, and his theory promised such excellent returns that now it is being carried on by the department of agriculture, as well as by various state agricultural colleges in the west and the Carnegie Desert laboratory at Tucson, Ariz.

With grains adapted to the peculiar soil and climatic conditions of the semi-arid region, and with giant traction machinery plowing and cultivating the grazing grounds of the buffalo, the conquest of the prairie would seem to be in sight, and the hardest of American agricultural problems would appear to be solved.

## LIVE STOCK NOTES.

Teach the colt to draw loads by degrees. Gentleness pays best with the colt or horse.

A draft horse should have a large chest and square shoulders. There is no better place to fit a colt for market than on the farm.

A horse that is trained without blinds is usually the safer horse.

Old ewes and poor breeders should be fattened now, and sent to the butcher.

Great care should be used in watering the horses. A little and often is the best way.

Pork production appeals strongly to a man of limited means who desires quick returns.

Sheep return to the soil 80 per cent of fertility of food eaten. Sheep manure is valuable.

Whole grain makes best feed for sheep. Cleanliness, pure water and salt are a necessity.

If when the hogs are growing fast their hind legs become weak, feed a little bone meal daily.

Examine wilder and leas carefully; see that both tests are open or you may have caked udder.

Sheep have warm wool coats; don't be afraid to turn them out in good weather, even if it is cold.

The sheep industry cannot reach perfection until every mongrel dog in the land is exterminated.

The successful feeding of lambs depends largely on their being offered great variety of food while in the yards.

The pigs and the light porkers should go to the market early.

Oats for the brood sows will produce better muscle for the pigs.

Shredded Fodder on Berries. If the strawberry bed has not yet been covered, and shredded corn fodder can be had, there is no better material which can be used. An advantage which it possesses over straw or most other litter is that it is free from weed seed. The plants are usually injured, if at all, by the late winter, so the covering should not be put on soon.

Proper Shoeing. In shoeing the foot should only have so much hoof removed from it at each shoeing as is necessary for the proper fitting of the shoe.

## PULLED IN DIFFERENT WAYS

Ordinary Man on the Street Somewhat Puzzled by Seemingly Business Contradictions.

"Life is full of contradictions."

"Yes."

"For instance, about six months ago a life insurance agent got after me, and hounded me nearly to death. I told him at the start that I had all the insurance I was able to carry, but he kept right on trying to persuade me that I needed more and finally, in sheer desperation, I consented to take out another policy. Then the company's doctor began trying in every way he could think of to make it impossible for me to get the insurance. He acted as if I was voluntarily trying to beat the company in some way, and when I failed to pass the examination both he and the agent appeared to think I had wronged them by taking up their time."

"That's nearly as bad as my case. Several months ago representatives of a piano house got after me for the purpose of persuading me to buy a piano on the installment plan. Just to get rid of them I at last agreed to buy. Now they've got a corps of men out trying to dig up proof that I never could or would pay for the piano if they were to let me have it. Business is a great thing."

## ALMOST FRANTIC WITH ITCHING ECZEMA

"Eight years ago I got eczema all over my hands. My fingers fairly bled and it itched until it almost drove me frantic. The eruption began with itching under the skin. It spread fast from between the fingers around the nails and all over the whole hands. I got a pair of rubber gloves in order to wash dishes. Then it spread all over the left side of my chest. A fine doctor treated the trouble two weeks, but did me no good. I cried night and day. Then I decided to try Cuticura Soap and Ointment but without much hope as I had gone so long. There was a marked change the second day, and so on until I was entirely cured. The Cuticura Soap we have always kept in our home, and we decided after that lesson that it is a cheap soap in price and the very best in quality. My husband will use no other soap in his shaving now." (Signed) Mrs. G. A. Selby, Redonda Beach, Cal., Jan. 15, 1911. Although Cuticura Soap and Ointment are sold by druggists and dealers everywhere, a sample of each, with 32-page book, will be mailed free on application to "Cuticura," Dept. 24 K, Boston.

Mary's Little Postscript. Mistress—Mary, wasn't that gentleman asking for me?

The New Maid—No, mum, he described the lady he wanted to see as being about 40, and I told him it couldn't be you.

Mistress—Quite right, my dear. And you shall have an extra afternoon off tomorrow.

The New Maid—Yes, mum! Thankee, mum! Yes, mum! I told him it couldn't be you, as you was about 50.

Mistress—And while you're taking your afternoon off you'd better look out for a new place!

Gentle Correction Needed. Mr. Littlefist—Doctor, what did you tell me was your special treatment for sleeplessness?

Medico—We strike at the cause or the origin of the trouble.

Mr. Littlefist—You don't say so! Well, you will find the baby in the other room. Only, don't strike at him too hard.

The Man She Heard About. "There was one man whose life was perfect," said the Sunday school teacher. "Which one of you can tell me who he was?"

Little Mary Jane's hand went up, and the teacher nodded to her.

"He was mamma's first husband," she said.

Her Career. She—You know Clara was ambitious to have a career.

Mamma—And matrimony interferes with a career?

She—Yes, but she made up her mind that she doesn't want any career that matrimony interferes with.

—Puck.

Important to Mothers. Examine carefully every bottle of CASTORIA, a safe and sure remedy for infants and children, and see that it bears the Signature of J. C. FLETCHER.

In Use For Over 30 Years. Children Cry for Fletcher's Castoria.

Not Affinities. Mistress—And why did you leave your last place?

Maid—My and the missus was not congenial.—Harper's Bazar.

NO DRIVE-OUT MALARIA AND BUILD-UP THE SYSTEM. Take the 100 Percent GUARANTEED CHILL PILLS. You know what you are taking. The formula is purely scientific and is in a liquid form and the most effective form. See your druggist and physician for more.

Accepting a Compliment. Neighbor—What a lovely day this is!

Weather Man—Thank you.

## ONE WAY OUT OF IT.

Aviator Was Clever at His Work, But Shone Best in Another Line of Endeavor.



The Deacon—You shouldn't fly your kite on Sunday.

The Boy—Oh! well, de Kite's made out a religious paper.

Young, but Oh, My! The lawyer was sitting at his desk, absorbed in the preparation of a brief.

So bent was he on his work that he did not hear the door as it was pushed gently open, nor see the curly head that was thrust into his office. A little sob attracted his notice, and turning, he saw his face that was streaked with tears, and told plainly that his feelings had been hurt.

"Well, my little man, did you want to see me?"

"Are you a lawyer?"

"Yes. What do you want?"

"I want—there was a divorce from my papa and mamma!"

A Little Off. Senator Penrose was talking in Washington about the dreadful hunting accidents of last month.

"When buck fever seizes a man," he said, "he goes as far off his aim as the old lady went in her definition of the word 'bellicose.'"

She was talking with a friend about a bishop.

"He's a fine man," said the friend, "a fine, handsome man. His only trouble is that he's a little bellicose."

"Bellicose?" said the old lady with a surprised frown. "He must have changed, then. The last time I saw him he was tall and rather slender."

How He Found Out. "Mr. Chairman," shouted one of the delegates to the convention, "I move that the nominating speeches be limited to one minute each!"

"Second the motion!" yelled a dozen others.

A storm of protest arose, but the chairman put the motion.

It was lost by a vote of 47 to 45.

"I merely wished to find out, Mr. Chairman," explained the delegate who had made the motion, "how many ambitious orators there are in this convention. There are 47."

Think of It! Two brothers, each of whom is nearly six feet and a half tall, were one day introduced by an acquaintance to a young lady. As she sat gazing up at the pair of giants in wonder and awe, she exclaimed:

"Great heavens! Suppose there had been only one of you!"

All Very True, but—Fond Father—Yes, Johnny, when the millennium is come the lamb can lie down with the lion in perfect safety.

Little Johnny (doubtfully)—I s'pose that's so, but I'd rather be the lion, just the same.

Some One Else's Meat. Broker—Business is simply rotten these days!

Friend—Why? Isn't there a sucker born every minute?

Broker—Yes. But they buy automobiles—Puck.

It seems that to make both ends meet requires no end of money.

## BEST TRICK NOT IN THE AIR

Aviator Was Clever at His Work, But Shone Best in Another Line of Endeavor.

Henry M. Neely, the aviator poet of Philadelphia, said at a recent banquet at the Bellevue-Stratford:

"Yes, it is true that it takes a lot of money to become an aviator. You can't get an aeroplane and you can't learn to fly without plenty of cash."

Mr. Neely smiled.

"I was watching a brother aviator making a volplane the other day, when I heard a young lady say:

"He can do a lot of tricks, can't he?"

"Yes, you bet he can," her companion agreed.

"What is his best trick?" she continued.

"His best trick far and away," was the reply, "is buying a biplane on credit. He's done it twice now, and I shouldn't be surprised to see him pull it off a third time before he breaks his neck."

Jones Admitted It. Jones and Brown argued as they always did when they had time enough. They had dined together, and as Jones lived at a distance and it was very late Brown offered to put him up for the night.

On the way home they fell to discussing the strategy of the Civil war as indicated by the campaigns of Lee and Grant. The topic was elastic enough to keep them going for half an hour, and reached its height as they neared the Brown house.

Then Brown lost his temper. "Jones," said he, "if you don't admit that Grant was a greater general than Lee, you can't sleep here."

It was then two o'clock in the morning, and Jones was eight miles from home.—Chicago Post.

What has become of the old-fashioned man whose word was as good as his bond?

\*You'll generally always find that the person who is most suspicious of others, himself needs watching.

You need expect no quarter from the footpad until you give up your last cent.

MAKERS OF PERDAY (manufacturing guaranteed) Lateral Property at half price. Sample sent by return mail. WILLIAMS COMPANY, Trinidad, Col.

Most of us would keenly enjoy working—if only we weren't compelled to do it.

Lewis' Single Binder, straight 5c—many smokers prefer them to 10c cigars.

Many a man's handshake is less sincere than the wag of his dog's tail.

Readers of this paper desiring to buy anything advertised in its columns should insist upon having what they ask for, refusing all substitutes or imitations.

Oklahoma Directory WESTERN DETECTIVE AGENCY General detective business transacted in all parts of the world. Confidential investigation, fingerprinting, character specialty, expert for corporations and individuals. Wm. H. Miller, Manager. Suite 212, Lincolnville Bldg., Phone 2340, Oklahoma City, Okla.

KERFOOT-MILLER & CO. (Incorporated) Manufacturers of BRONCHO BRAND OVERALLS AND WORK CLOTHING Wholesale Dry Goods OKLAHOMA CITY OKLAHOMA Send us your mail orders.

Discouraged The expression occurs so many times in letters from sick women, "I was completely discouraged." And there is always good reason for the discouragement. Years of pain and suffering. Doctor after doctor tried in vain. Medicines doing no lasting good. It is no wonder that the woman feels discouraged.

Thousands of these weak and sick women have found health and courage regained as the result of the use of Dr. Pierce's Favorite Prescription.

It establishes regularity, heals inflammation and ulceration, and cures weakness.

IT MAKES WEAK WOMEN STRONG AND SICK WOMEN WELL.

Refuse substitutes offered by unscrupulous druggists for this reliable remedy.

Sick women are invited to consult by letter, free. All correspondence strictly private and absolutely confidential. Write without fear and without fee to World's Dispensary, R. V. Pierce, M. D., Pres't, Buffalo, N. Y.

Dr. Pierce's Pleasant Pellets regulate and invigorate stomach, liver and bowels. Sugar-coated, tiny granules, easy to take as candy.

Special Offer to Printers This paper is printed from ink made in Savannah, Ga. by the SOUTHERN OIL & INK CO., Savannah, Ga. Price 6 cents per pound, F. O. B. Savannah. Your patronage solicited.

PUTNAM FADELESS DYES Color more goods brighter and faster colors than any other dye. One lb. package colors all blues. They dye in cold water better than any other dye. You can dye any garment without ripping apart. Write for free booklet—How to Dye, Bleach and Mix Colors. MONROE DRUG COMPANY, Quincy, Ill.

Then They'd Stay at Home. "Hunderby has some freakish ideas of legislation."

"Yes?"

"One of his latest notions is that capital punishment ought to be provided for women who gab about too much."

"Capital punishment would be rather severe."

"You don't understand. Hunderby would have such women compelled by law to wear hats that were out of style."

The modern woman gets next to the latest wrinkle with a massage machine.

PIES CURED IN 10 TO 15 DAYS. You cannot tell how much better it is until you have tried it. Write for free booklet—How to Cure Skin Diseases. MONROE DRUG COMPANY, Quincy, Ill.

Reproches are certainly an effective cure for indifference; but they change it to anger rather than love.

Mrs. Winslow's Soothing Syrup for Children soothes the gums, reduces inflammation, stops teething, cures colic, and is a sure remedy for all ailments of infants.

A woman falls in love gracefully, but a man usually stumbles into it.

## A HEALTHY, HAPPY OLD AGE

May be promoted by those who gently cleanse the system, now and then, when in need of a laxative remedy, by taking a desertspoonful of the ever refreshing, wholesome and truly beneficial Syrup of Figs and Elixir of Senna, which is the only family laxative generally approved by the most eminent physicians, because it acts in a natural, strengthening way and warms and tones up the internal organs without weakening them. It is equally beneficial for the very young and the middle aged, as it is always efficient and free from all harmful ingredients. To get its beneficial effects it is always necessary to buy the genuine, bearing the name of the Company—California Fig Syrup Co.—plainly printed on the front of every package.

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